

For Tariff Filing 2014

Refrigerator/Freezer Recycling
Aug-14 **KU rebate; includes advertising costs; incorporates contractor pricing**

This program provides collection and disposal of old, inefficient freezers. Members are paid a bounty for each freezer turned in and taken off of the grid. The freezer will be turned over to a licensed recycler.

<u>Assumption</u>	<u>Source</u>
Load Impacts Before Participant 696 kWh, 0.07 kW (coincident with winter peak), 0.10 kW (summer)	Weighted average usage for a pre-2000 appliance (refrigerator or freezer), where weights are expected levels of participation for refrigerators (783 kWh) and freezers (525 kWh)
After Participant 0 kWh, 0.00 kW (coincident with winter system peak), 0.00 kW (summer)	The appliance is removed from the grid.
Lifetime of savings	7 Years based on Xcel and Vermont reports
Generation Capacity Cost - EE = combined cycle, 100% summer \$119.00 in 2013 Avoided Electricity Energy Costs - PJM Market	Combined Cycle Baseload unit. 100% allocation to summer based on ACES July 1 2014 energy forward curve for AEP_Dayton. DSMore Scenario 1, 0.717 esc in 2015
Participant Costs \$ 0	No out of pocket expense is incurred by the participant
Administrative Cost EK \$8,250 one time set up fee; \$40,000 per year admin (2015-2017); 4 only) plus \$81 per participant	\$16,000 annual fixed cost is for advertising and EM&V. \$24,000 annual fixed cost is admin fee to contractor. Per appliance cost is fee paid to contractor for promotion, enrollment, pickup, recycling and program admin costs.
Co-op \$0 per new participant	EKPC pays all costs for this program directly
Rate Schedule - Retail Average Residential Rate for Co-ops Cust chrg \$9.62, Energy Rate \$.08966	Current rates in effect as of June, 2011.
Rate Schedule - Wholesale East Kentucky E-2 rate.	Current rates in effect as of June, 2011.
Participation - 2,340 new per year, 3 years (2015-2017). 36% free riders.	Harvest rate of 3.5% per year based on results from PG&E and PacifiCorp. Free rider estimate based on ADM study for CA and Fort Collins study
Rebates Co-op to Participant \$ 50 EK to Co-op \$ 140	Bounty fee. Based on KU program 100% of Rebate plus 5 years net lost revenues

Refrigerator/Freezer Recycling -for 2014 Tariff filing; actual pricing from contractor; PJM
avoided energy costs and avoided CC capacity costs

Distribution System Benefits		Distribution System Costs	
Power Bill Declines	\$ 1,145,918	Revenue Declines	(\$1,739,619)
Rebates From EK	\$941,858	Administrative Costs	\$0
		Rebates Paid To Consumers	(\$336,378)
Total Benefits	\$2,087,777	Total Costs	(\$2,075,997)
Benefit / Cost Ratio: 1.01			

Participant Benefits		Participant Costs	
Electric Bill Declines	\$1,403,965	Up Front Investment	\$0
Rebates From Distribution System	\$ 317,941		
Reductions in O&M costs	\$0		
Total Benefits	\$1,721,905	Total Costs	\$0
Benefit / Cost Ratio: #DIV/0!			

Total Resource Benefits		Total Resource Costs	
Avoided Energy Costs	\$940,840	Up Front Customer Investment	\$0
Avoided Gen Capacity Costs	\$347,258	Distribution System Admin. Costs	\$0
Avoided Transmission Expense	\$52,758	EK Administrative Costs	(\$668,183)
Reduced Customer O&M costs	\$0		
Total Benefits	\$1,340,857	Total Costs	(\$668,183)
Benefit / Cost Ratio: 2.01			

EK Benefits		EK Costs	
Avoided Energy Costs	\$940,840	Decrease In Revenue	(\$1,145,918)
Avoided Gen Capacity Costs	\$347,258	Rebates Paid	(\$941,858)
Avoided Transmission Expense	\$52,758	Administrative Costs	(\$668,183)
Total Benefits	\$1,340,857	Total Costs	(\$2,755,960)
Benefit / Cost Ratio: 0.49			

Societal Benefits		Societal Costs	
Avoided Energy Costs	\$993,673	Up Front Customer Investment	\$0
Avoided Gen Capacity Costs	\$366,697	Distribution System Admin. Costs	\$0
Avoided Transmission Expense	\$55,716	EK Administrative Costs	(\$677,383)
Environmental Externalities	\$0		
Total Benefits	\$1,416,086	Total Costs	(\$677,383)
Benefit / Cost Ratio: 2.09			

Combined RIM:			
Benefits:	\$1,340,857	Costs:	(\$2,744,180)
Benefit / Cost Ratio: 0.49			